

# Receiving Report

Date: 13-12-11

Batch No: 127736

Supplier: ThyssenKrupp materials

Dart P/O: 22228j

Packing Slip: Yes  No  
 Invoice: Yes  No  
 Receipt: Cash  Cr

Release Note Attached: Yes  No  N/A  
 Waybill Attached: Yes  No  N/A  
 Shipment Complete: Yes  No  N/A  
 QC6 Inspection: On 13/12/11  N/A  
 Work Order  N/A

## Discrepancies

Part Number	Description	Quantity Desired	Quantity Received	Quantity Returned	Quantity Short	Comments

Initials of receiver (if shipment OK) Level 12 SP

Production/Admin: B-12-11  
 Date \_\_\_\_\_  
 Received/Costing Initial SP

Location \_\_\_\_\_

## Purchase Order Receipt Listing

Wednesday December 11, 2013 7:58:56 AM

All amounts are calculated in domestic currency.

All Vendors PO ID PO22228 Receipt Dates from 12/1/12013 to 12/11/2013  
All Item ID/GL/WOS All Rec. Employees All Currencies  
Grouped by Vendor ID

## B I L L O F L A D I N G

No: PEC 854405  
11 dec

Ship From:  
 THYSSENKRUPP MATERIALS NA  
 2821 LANGSTAFF ROAD  
 CONCORD, ONTARIO L4K 5C6  
 Tel: 905 669 9444 Fax: 905-738-9033

Ship Date 09Dec13 at 15:20 From PFW  
 Probill  
 Via VIM TRANSFER  
 FOB HAWKESBURY  
 Frt PREPAID  
 Route 0- 0 Manifest  
 Vhicle Trailer  
 Slp STAN IVERS (905-532-1350)  
 Sold To: ( 20115 )  
 DART AEROSPACE  
 1270 ABERDEEN ST  
 HAWKESBURY, ON K6A 1K7

Ship To: ( 1 )  
 DART AEROSPACE  
 1270 ABERDEEN ST  
 HAWKESBURY, ON K6A 1K7  
 Tel: 613-632-9577 Fax: 613-632-1053

## B I L L O F L A D I N G

1) Our Order PEC-630610- 1 Your PO # PO22228  
 Part # QQ-A-250/12 PLATE

Rel # /CHANTAL

ALUMINUM PLATE 7075-T651

2.00" THICK X 3.5000" X 144.0000"

Heat Number Tag No  
 461731 243898

Quantity PCS Wt LBS  
 7.00 SFT 2 MTR 219

2) Our Order PEC-630610- 2 Your PO # PO22228  
 Part # QQ-A-250/12 PLATE

Rel # /CHANTAL

ALUMINUM PLATE 7075-T651

3.00" THICK X 4.0000" X 72.0000"

Heat Number Tag No  
 400911 243900

Quantity PCS Wt LBS  
 4.00 SFT 2 MTR 179

3) Our Order PEC-630610- 3 Your PO # PO22228  
 Part # QQ-A-250/12 PLATE

Rel # /CHANTAL

ALUMINUM PLATE 7075-T651

.750" THICK X 2.0000" X 144.0000"

Heat Number Tag No  
 717875 243901

Quantity PCS Wt LBS  
 2.00 SFT 1 MTR 23

4) Our Order PEC-630610- 4 Your PO # PO22228  
 Part # QQ-A-250/12 PLATE

Rel # /CHANTAL

ALUMINUM PLATE 7075-T651

1.750" THICK X 2.2500" X 144.0000"

Heat Number Tag No  
 625671 243902

Quantity PCS Wt LBS  
 2.25 SFT 1 MTR 61

Page: 1 ....Continued

ALUMINIUM - LATON - CUIVRE - PLASTIQUE - ACIER INOX  
 ALUMINUM - BRASS - COPPER - PLASTIC - STAINLESS

TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ÊTRE  
 RAPPORTÉES IMMÉDIATEMENT.

ERRORS OR SHORTAGE MUST BE REPORTED IMMEDIATELY

RETOUR DE MARCHANDISES AVEC NOTRE NUMERO D'APPROBATION SEULEMENT.  
 MERCHANDISE MAY NOT BE RETURNED WITHOUT OUR APPROVAL NUMBER.

## B I L L O F L A D I N G

No: PEC 854405

Ship From:  
**THYSSENKRUPP MATERIALS NA**  
 2821 LANGSTAFF ROAD  
 CONCORD, ONTARIO L4K 5C6  
 Tel: 905 669 9444 Fax: 905-738-9033

Ship Date 09Dec13 at 15:20 From PFW  
 Probill  
 Via VIM TRANSFER  
 FOB HAWKESBURY  
 Frt PREPAID  
 Route 0-0 Manifest  
 Vhicle Trailer  
 Slp STAN IVERS (905-532-1350)  
 Sold To: ( 20115)  
**DART AEROSPACE**

Ship To: ( 1 )  
**DART AEROSPACE**

## B I L L O F L A D I N G

5) Our Order PEC-630610- 5 Your PO # PO22228  
 Part # QQ-A-250/12 PLATE Rel # /CHANTAL

ALUMINUM PLATE 7075-T651

.250" THICK X 6.0000" X 144.0000"

Heat Number Tag No  
 R13495 243932

Quantity  
 6.00 SFT

PCS  
 1

Wt LBS  
 22

**MTR**

SO B-D-11.

TOTAL:

Tags  
 5

PCS  
 7

LBS  
 504

MILL TEST REPORTS, PACKING SLIPS ARE TO SENT  
 WITH MATERIAL AND FAXED TO THE CUSTOMER PRIOR  
 TO SHIPPING.

ATTN: CHANTAL/LINDA

\*\* ALL PACKING SLIPS MUST HAVE THE HEAT NUMBER \*\*

\*\* REFERENCED ON IT \*\*

TOTAL 4 BDLS GW. 587 LBS

ITEM (1,3) BDL, (2) BDL, (4) BDL, (5) BDL.

\*CUSTOMER PICK-UP HRS AT THYSSENKRUPP MATERIALS NA  
 CONCORD, ONT.\* \*\*\* 9:00 AM TO 4:00 PM \*\*\*

\*\*\*\*\* TEL. 800-926-2600 \*\*\*\*\*

\*\*\*\*\* WE STOCK STAINLESS STEEL \*\*\*\*\*

\* PLEASE LET US QUOTE YOUR NEXT REQUIREMENT \*

\*\*\*\*\* PLEASE NOTE A \$25.00 ENERGY SURCHARGE WILL BE

ADDED TO EVERY ORDER.\*\*\*

Page: 2 .... Last

ALUMINIUM • LAITON • CUIVRE • PLASTIQUE • ACIER INOX  
 ALUMINUM • BRASS • COPPER • PLASTICS • STAINLESS

TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ÊTRE  
 RAPPORTÉES IMMÉDIATEMENT.

ERRORS OR SHORTAGE MUST BE REPORTED IMMEDIATELY

RETOUR DE MARCHANDISES AVEC NOTRE NUMERO D'APPROBATION SEULEMENT.  
 MERCHANDISE MAY NOT BE RETURNED WITHOUT OUR APPROVAL NUMBER.



(1)

**CERTIFIED TEST REPORT**  
Constellium Rolled Products Ravenswood, LLC

COPPER & BRASS SALES  
1015 SAINT JEROME STREET  
MISHAWAKA IN  
46544

COPPER & BRASS SALES  
P.O. BOX 5116  
SOUTHFIELD MI  
48086

COPPER&amp;BR X12606 4075

INCLUSION

SERIAL#:

20131014X12606 PAGE 1 OF 3

CUSTOMER PURCHASE ORDER NO. & ITEM 5400196101				Constellium ORDER NO. 110-513381		CERTIFICATION	
ALLOY 7075				CLAD. 00	TEMPER T651	GAUGE 2.03000	WIDTH 48.500 LENGTH 144.500
ITEM ORDERED MOLD PLATE-DIST GE SPEC PLATE, SAWED MILL							
CUSTOMER SPECIFICATION AMS-QQ-A-250/12							
PART NUMBER ALFLR00999		B/L NUMBER X12600		DATE SHIPPED 10/14/13			
WEIGHT SHIPPED 12,126		NO. OF PIECES 8		GOVT. CONTRACT NO.			

"Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."

Constellium Rolled Products Ravenswood, LLC  
Rt 2 South, Century Road  
P.O. BOX 68  
RAVENSWOOD, WV 26164 USA

*Rodney J. Feltz*  
Rodney J. Feltz - Laboratory Manager

LOT NUMBER	TEST DIRECTION	NO. OF TESTS	ULTIMATE STRENGTH K.S.I.		YIELD STRENGTH K.S.I.		ELONGATION %		COND % IACS											
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.										
461721	LT	2	***** T651 80.3	81.0	71.0	71.0	***** 11.0	11.5												
All material contained in lot 461721 was cast and manufactured in the USA.																				
461731	LT	2	80.6	81.0	70.6	72.0	11.0	11.0												
All material contained in lot 461731 was cast and manufactured in the USA.																				
ALL LOTS ON THIS CERTIFICATION ALSO CONFORM TO THE FOLLOWING REQUIREMENTS																				
ASTM B209-10, AMS 4045K																				
CHEM COMP	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS		
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTAL MAX.	
SEE ACTUAL CHEMICAL COMPOSITION											ALUMINUM REMAINDER									

P-860-155D (06/11)

From: ThyssenKrupp Materials NA  
Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402843098  
CstAr CstOr 254172  
Wgt.: 219 LB Date 12/05/2013

*John R. Gambetta*



**CERTIFIED TEST REPORT**  
Constellium Rolled Products Ravenswood, LLC

COPPER & BRASS SALES  
1015 SAINT JEROME STREET  
MISHAWAKA IN  
46544

COPPER & BRASS SALES  
P.O. BOX 5116  
SOUTHFIELD MI  
48086

COPPER&BR X12606 4075 INCLUSION SERIAL#: 20131014X12606 PAGE 2 OF 3

CUSTOMER PURCHASE ORDER NO. & ITEM 5400196101				Constellium ORDER NO. 110-513381		CERTIFICATION	
ALLOY 7075	CLAD. 00	TEMPER T651	GAUGE 2.03000	WIDTH 48.500	LENGTH 144.500	"Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."	
ITEM ORDERED MOLD PLATE-DIST GE SPEC PLATE, SAWED MILL						Constellium Rolled Products Ravenswood, LLC Rt 2 South, Century Road P.O. BOX 68 RAVENSWOOD, WV 26164 USA	
CUSTOMER SPECIFICATION AMS-QQ-A-250/12				Rodney J. Feltz Rodney J. Feltz - Laboratory Manager			
PART NUMBER ALFLR00999		B/L NUMBER X12600		DATE SHIPPED 10/14/13			
WEIGHT SHIPPED 12,126		NO. OF PIECES 8		GOVT. CONTRACT NO.			

LOT NUMBER	TEST DIRECTION	NO. OF TESTS	ULTIMATE STRENGTH K.S.I.		YIELD STRENGTH K.S.I.		ELONGATION %		COND % IACS										
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.									
ACTUAL CHEMICAL COMPOSITION																			
461721	C	SI= 0.10 CR= 0.19 OTHERS-EACH: .05	FE= 0.15 ZN= 5.55 MAX.	CU= 1.45 TI= 0.03 OTHERS TOTAL: .15	MN= 0.05 ZR= 0.01 MAX. AL REMAINDER	MG= 2.58													
461731	C	SI= 0.10 CR= 0.19 OTHERS-EACH: .05	FE= 0.15 ZN= 5.55 MAX.	CU= 1.45 TI= 0.03 OTHERS TOTAL: .15	MN= 0.05 ZR= 0.01 MAX. AL REMAINDER	MG= 2.58													
<i>13/12/18</i>																			
CHEM COMP	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS	
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTAL MAX.
SEE ACTUAL CHEMICAL COMPOSITION																			
ALUMINUM REMAINDER																			

P-860-155D (06/11)

From: ThyssenKrupp Materials NA  
Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402843098  
CstAr CstOr 254172  
Wgt.: 219 LB Date 12/05/2013



**CERTIFIED TEST REPORT**  
Constellium Rolled Products Ravenswood, LLC

COPPER & BRASS SALES  
1015 SAINT JEROME STREET  
MISHAWAKA IN  
46544

COPPER & BRASS SALES  
P.O. BOX 5116  
SOUTHFIELD MI  
48086

COPPER&BR X12606 4075 INCLUSION SERIAL#: 20131014X12606 PAGE 3 OF 3

CUSTOMER PURCHASE ORDER NO. & ITEM 5400196101				Constellium ORDER NO. 110-513381		CERTIFICATION	
ALLOY 7075	CLAD. 00	TEMPER T651	GAUGE 2.03000	WIDTH 48.500	LENGTH 144.500	<p>"Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."</p> <p>Constellium Rolled Products Ravenswood, LLC Rt 2 South, Century Road P.O. BOX 68 RAVENSWOOD, WV 26164 USA</p> <p><i>Rodney J. Feltz</i> Rodney J. Feltz - Laboratory Manager</p>	
ITEM ORDERED MOLD PLATE-DIST GE SPEC PLATE, SAWED MILL							
CUSTOMER SPECIFICATION AMS-QQ-A-250/12							
PART NUMBER ALFLR00999		B/L NUMBER X12600		DATE SHIPPED 10/14/13			
WEIGHT SHIPPED 12,126		NO. OF PIECES 8		GOVT. CONTRACT NO.			

LOT NUMBER	TEST DIRECTION	NO. OF TESTS	ULTIMATE STRENGTH K.S.I.		YIELD STRENGTH K.S.I.		ELONGATION %		COND % IACS											
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.										
			THIS TEST REPORT SHALL NOT BE REPRODUCED APPROVAL OF THE LABORATORY OR AUTHORIZED THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER	EXCEPT IN FULL, WITHOUT QUALITY DELEGATE.					THE WRITTEN STATEMENTS OR ENTRIES ON FEDERAL LAW.											
					CHEMISTRY BY OES: ARKSPARK															
			CHEMISTRIES REPORTED IN	PERCENTAGE BY WEIGHT.																
			WHEN FRACTURE TOUGHNESS TEST REQUIRED,	TESTED PER ASTM E399.																
			WHEN TENSILE TEST REQUIRED,	TESTED PER ASTM E8; B557.																
			Mark Paperwork: ALFLR00999																	
			DUNS Number: 090570149;	CAGE Code: 1YWL9																
			Mercury is not a normal contaminant in aluminum alloys and neither mercury nor any of its compounds were utilized in the manufacture of our product.																	
			"END OF CERTIFICATION"																	
C H E M C O M P	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS		
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTAL MAX.	
SEE ACTUAL CHEMICAL COMPOSITION																				
ALUMINUM REMAINDER																				

P-860-155D (06/11)

From: ThyssenKrupp Materials NA  
Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402843098  
CstAr CstOr 254172  
Wgt.: 219 LB Date 12/05/2013



# INSPECTION CERTIFICATE № 13.12328

EN 10204 - 3.1



Certified by Russian Registe

(3)

Consigner: KAMENSK URALSKY METALLURGICAL WORKS JOINT STOCK COMPANY  
5, Zavodskaya Str., Kamensk Uralsky, Sverdlovsk Region, 623405, Russia Tel: (3439) 39 52 22 Fax: (3439) 39 50 68

Consigner: KAMENSK URALSKY METALLURGICAL WORKS JOINT STOCK COMPANY 5, Zavodskaya Str., Kamensk Uralsky, Sverdlovsk Region, 623405, Russia Tel: (3439) 39 52 22 Fax: (3439) 39 50 68				Quantity: 6 Net Weight, kg.: 1875						
Contract number: N14326-S 5400177513-R01 Article number: ALFLR003206				Specification Nr: N14326 Lot Nr: 1 Package Nr: 619824						
Description of Goods: Plates				Requirements on the Products:						
Grade of Product		Dimensions, inch/mm		Material conforms to quality of alloy: 7075 T651						
- 0.75"X60.5"X144.5" - 19.050X1536.7X3670.3				Product conforms to all requirements of: ASTM-B209-10, AMS-QQ-A250/12AMS4045K, This product conforms to European Union RoHS Directive 2002/95/EC						
Mechanical Properties										
The Condition of Tested Standards	Lot Number	Cast Number	Number of Tests	Tensile Strength		Yield Strength (0.2% offset)		Elongation, %	Hardness, HB	
				ksi		ksi				
				min	max	min	max			
Required				78.0	-	68.0	-	7.0	-	
-	717875	12-1962	2	85.8	85.8	75.2	75.8	14.0	14.0	
Chemical Composition, %										
Element	Silicon Si	Iron Fe	Copper Cu	Manganese Mn	Magnesium Mg	Chromium Cr	Nickel Ni	Zinc Zn	Titanium Ti	Zirconium Zr
Required	0.4	0.5	1.2-2.0	0.3	2.1-2.9	0.18-0.28	-	5.1-6.1	0.2	-
Contents	0.04	0.16	1.4	0.02	2.5	0.19	-	5.9	0.08	-
Element	Ti+Zr	Na	Tin Sn	Bismuth Bi	Plumbum Pb	Mn+Cr	Ca	Other Elements		Al
Required	-	-	-	-	-	-		Each	Total	
Contents	-	-	-	-	-	-	0.05	0.15	remainder	remainder
Other Tests										
Method	Macro-structure	Micro-structure	UT	Electro-conductivity	SCF	Contents H2 of metals cm3/100gr	Mercury - Free "Russia is country of melt and manufacture"			
Result	-	-	-	-	-	0.07				

On behalf:

OAO KUMZ

Date:

25.04.13

Inspector:

G.A.Ostanina

Inspection Department engineer

N.V. Alekhina

Form № OAO/3.001 Revision 00

From: ThyssenKrupp Materials NA  
Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402843100  
CstAr CstOr 254172  
Wgt.: 23 LB Date 12/05/2013

# CERTIFIED INSPECTION REPORT

**Alcoa Inc.**

DAVENPORT WORKS 4879 State Street Bettendorf, IA 52722

We hereby certify that the material covered by this certificate has been inspected with and has been found to meet the applicable requirements described therein, including any specifications forming a part of the description and that samples representative of the material met the composition limits and had the mechanical properties shown on the face of this sheet.

This test report shall not be reproduced except in full without the written approval of the Quality Department. No alteration, addition or other change is authorized to be made to this certificate. The recording of false, fictitious, or otherwise fraudulent statements or entries on this certificate by any recipient may be punished as a felony under applicable law.

Per:

(4)

Rob Woodall  
Director of Manufacturing Davenport Works

Terrence Thom  
Quality Assurance Manager

Page 1 of 2

Ship To: COPPER & BRASS SALES INC  
1015 SAINT JEROME ST.  
MISHAWAKA 46554 IN

Item Description  
1.78 IN TK (+ .120 - 0.000) X 60.5 IN W (+.375 -  
0.000) X 144.5 IN LN (+.5 - 0.0) CAT X 090910-1 (N) A/T 7075-  
T651 RECTANGULAR MILL FINISH, SAWED  
AFTER 0096. EXC TK TL AMS-QQ-A-2507-12 IS 2007 EXC MRK,  
TK TL AMS4045 REV K EXC MRK, TK TL ASTM B209  
REV 10 (MARKED) KRAFT PAPER  
INTERLEAVED MAX GROSS SKID WGT: 5000 LB QUAN TOL +/-  
40 % CQR 0206868 REV 07 CUST REQ 13-11-  
20 \*\*\* W/E 13-11-23 \*\*\*

Num	Package	Ticket	Lot	Weight	Quantity	UOM	Inspector	clock	Numbers
1	577457	625671	3275	2	PC		47414		
2	577458	625671	3287	2	PC		47414		
3	577460	625671	3275	2	PC		47414		
			9837	6					

JY  
13/2/18

Notes for CQR: 0206868-7 PRODUCT PRODUCED AND MARKED TO THE REQUIREMENTS OF AMS-QQ-A-250/12 ALSO MEETS THE REQUIREMENTS OF QQ-A-250/12F. PROD UCT

PRODUCED AND MARKED TO THE REQUIREMENTS OF QQ-A-250/12 F ALSO MEETS THE REQUIREMENTS OF AMS-QQ-A-250/12.

CQR: 0206868-7 - Specification Limits -

UTP T651	Dir Long Transv.	Max Min	77.0	67.0	6
UTS KSI	TYS KSI	ELAD PCT			

Chemical Composition	SI	FE	CU	MN	MG	CR	ZN	TI	Each	Total	Other	Other	Aluminum
Alloy 7075	Max	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.15	REMAIN	
	Min			1.2		2.1	0.18	5.1					

From: ThyssenKrupp Materials NA  
Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402843090  
Cstar CstOr 254172  
Wgt.: 61 LB Date 12/04/2013

John. J. Smith

# CERTIFIED INSPECTION REPORT

**Alcoa Inc.**

DAVENPORT WORKS 4879 State Street Bettendorf, IA 52772

We hereby certify that the material covered by this certificate has been inspected with, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the description and that samples representative of the material met the composition limits and had the mechanical properties shown on the face of this sheet.

This test report shall not be reproduced except in full without the written approval of the Quality Department. No alteration, addition or other change is authorized to be made to this certificate. The recording of false, fictitious, or otherwise fraudulent statements or entries on this certificate by any recipient may be punished as a felony under applicable law.

Per:

*Rob Woodall*

Rob Woodall  
Director of Manufacturing Davenport Works

*Terence Thom*

Terence Thom  
Quality Assurance Manager

Page 2 of 2

COR: 0206868 .7 -Specification Limits (cont.) -----  
Lot: 625671 - Mechanical, Physical, Metallography, Quantometer Results -----

No->	Test	UTS	TYS	EL4D	PCT
1	Dir	KSI	KSI	10.7	
2	Long	82.8	73.9	10.7	
3	Transv.	81.8	73	10.7	
		82.6	73.6	10.8	

Cast Number	Chemical - OES	SI	FE	CU	MN	MG	CR	ZN	TI
H9835024	Actuals	0.05	0.32	1.7	0.01	2.6	0.19	5.6	0.02

This material was melted in the United States or a Qualifying Country [REF DFARS 225.872.1(a)]; it was manufactured in the United States

*jl  
13/12/18*

Ship Date	B.L. No.	Invoice No.	Alcoa No.	Item
2013-11-20	8912617	00000	1000536622-6	DP-36622-6
P.O. No./Govt Contract No.		Customer Alcoa Item		
5400199535		In #: 0060	C&B	G041090316R07

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From: ThyssenKrupp Materials NA  
Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402843090  
Cstar CstOr 254172  
Wgt.: 61 LB Date 12/04/2013

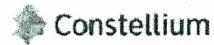
*John. G. Smith*

Constellium Valais SA

CH-3960 Sierre  
Suisse

Aerospace and Transportation  
Europe - AT Valais, Usines de Sierre et Steg

Tel : +41(0) 27 457 51 11  
<http://www.constellium.com>



(5)

CONSTELLIUM ROLLED PRODUCTS  
RAVENSWOOD, LLC

US -26164 RAVENSWOOD

INSPECTION CERTIFICATE  
According To EN 10204-3.1  
Disp. Advice / Cert 0080237066  
Date 10/07/2013 Page 1

Your Order	5400179908 Copper
Project	
Dated	01/05/2013
Our Confirmation No.	143280-60
Customer No.	606281
Sales Contact	Fabienne Salamin ++41 (27) 457 6432
Certificate Dpt :	41 27 457 66 92

Aluminium plates in AA7075-T651, mill finish,  
To AMS 4045K, AMS QQ-A-250/12 August 1997, ASTM B209 and SIE0002  
Alumitex paper interleaved

✓ 13/12/18

Your article : 012-000503

Lot	Production No.	Weight	Quantity	Dimensions
R13495	6241629	8434.74 Lbs	38	0.250" x 60.50" x 144.50"

Mechanical and technological properties

Sample min-max	Temper T651	Ksi-UTS >=78	Ksi-YS >=67	A%2Inch >=9	HB								

Measured values

R13495-1	T651	82.2	73.1	12	176								
R13495-2	T651	81.9	73.1	13	177								

Chemical composition

Required composition (% by weight)

Casting No	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti				
Min				1.2		2.1	.18		5.1				
Max	.40	.50	2.0	.30	2.9	28	.05	6.1	.20				

Analysis results (% by weight)

Other elements: Each <= 0.05% Total <= 0.15%

31476332	0.06	0.17	1.52	.049	2.46	0.19	.0045	5.64	.021				
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Remark

This certificate of conformance verifies that the organization took effective control of quality to meet the specified requirements on both the sales order(s) and the customer purchase order(s)

\*\*\* COUNTRY OF ORIGIN AND MANUFACTURE : SWITZERLAND \*\*\*  
Compliant to the European Union Directive 2011/65/EU also known as RoHS

Alain Thurre  
Inspection Department  
Valid without signature 03

Système de Management certifié  
ISO 9001 / ISO 14001 / OHSAS 18001

Definition of abbreviations on demand



**CERTIFIED TEST REPORT**  
Constellium Rolled Products Ravenswood, LLC

**COPPER & BRASS SALES**  
1015 SAINT JEROME STREET  
MISHAWAKA IN  
46544

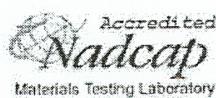
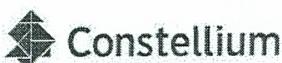
**COPPER & BRASS SALES**  
P.O. BOX 5116  
SOUTHFIELD MI  
48086

**COPPER&BR Z62807 4075 INCLUSION SERIAL#: 20131126Z62807 PAGE 1 OF 3**

CUSTOMER PURCHASE ORDER NO. & ITEM <b>5400205531</b>				Constellium ORDER NO. <b>110-513619</b>				CERTIFICATION													
ALLOY <b>7075</b>	CLAD. <b>00</b>	TEMPER <b>T651</b>	GAUGE <b>3.00000</b>	WIDTH <b>60.500</b>	LENGTH <b>144.500</b>																
ITEM ORDERED <b>TOOLING PLT-DIST/GE</b>																					
CUSTOMER SPECIFICATION <b>AMS-QQ-A-250/12</b>																					
PART NUMBER <b>ALFLR01006</b>	B/L NUMBER <b>Z62800</b>			DATE SHIPPED <b>11/29/13</b>			Constellium Rolled Products Ravenswood, LLC Rt 2 South, Century Road P.O. BOX 68 RAVENSWOOD, WV 26164 USA														
WEIGHT SHIPPED <b>5,420</b>	NO. OF PIECES <b>2</b>	GOVT. CONTRACT NO.																			

LOT NUMBER	TEST DIRECTION	NO. OF TESTS	ULTIMATE STRENGTH K.S.I.		YIELD STRENGTH K.S.I.		ELONGATION %		COND % IACS	
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN	MAX
<b>400911</b>	<b>LT</b>	<b>2</b>	<b>*****</b>	<b>T651</b>	<b>79.6</b>	<b>80.2</b>	<b>69.3</b>	<b>70.0</b>	<b>*****</b>	<b>13.5</b>
All material contained in lot 400911 was cast and manufactured in the USA.										
ALL LOTS ON THIS CERTIFICATION ALSO CONFORM TO THE FOLLOWING REQUIREMENTS										
<b>ASTM B209-10 AND AMS 4045K</b>										

CHEM COMP	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS		
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTAL MAX.	
SEE ACTUAL CHEMICAL COMPOSITION																				
ALUMINUM REMAINDER																				



## CERTIFIED TEST REPORT

Constellium Rolled Products Ravenswood, LLC

COPPER & BRASS SALES  
1015 SAINT JEROME STREET  
MISHAWAKA IN  
46544

COPPER & BRASS SALES  
P.O. BOX 5116  
SOUTHFIELD MI  
48086

COPPER&amp;BR Z62807 4075 INCLUSION SERIAL#: 20131126Z62807 PAGE 2 OF 3

CUSTOMER PURCHASE ORDER NO. & ITEM <b>5400205531</b>				Constellium ORDER NO. <b>110-513619</b>	
ALLOY <b>7075</b>	CLAD. <b>00</b>	TEMPER <b>T651</b>	GAUGE <b>3.00000</b>	WIDTH <b>60.500</b>	LENGTH <b>144.500</b>
ITEM ORDERED <b>TOOLING PLT-DIST/GE</b>					
CUSTOMER SPECIFICATION <b>AMS-QQ-A-250/12</b>					
PART NUMBER <b>ALFLR01006</b>	B/L NUMBER <b>Z62800</b>	DATE SHIPPED <b>11/29/13</b>			
WEIGHT SHIPPED <b>5,420</b>	NO. OF PIECES <b>2</b>	GOVT. CONTRACT NO.			

## CERTIFICATION

"Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."

Constellium Rolled Products Ravenswood, LLC  
Rt 2 South, Century Road  
P.O. BOX 68  
RAVENSWOOD, WV 26164 USA

*Rodney J. Feltz*  
Rodney J. Feltz - Laboratory Manager

LOT NUMBER	TEST DIRECTION	NO. OF TESTS	ULTIMATE STRENGTH K.S.I.		YIELD STRENGTH K.S.I.		ELONGATION %		COND % IACS									
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.								
ACTUAL CHEMICAL COMPOSITION																		
400911	C	SI= 0.05 CR= 0.20 OTHERS-EACH: .05 MAX. OTHERS TOTAL: .15 MAX. AL REMAINDER	FE= 0.09 ZN= 5.49	CU= 1.39 TI= 0.04	MN= 0.01 ZR= 0.01	MG= 2.60												
<i>11/12/18</i>																		
CHEM COMP	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTAL MAX.	
SEE ACTUAL CHEMICAL COMPOSITION																		
ALUMINUM REMAINDER																		



**CERTIFIED TEST REPORT**  
Constellium Rolled Products Ravenswood, LLC

COPPER & BRASS SALES  
1015 SAINT JEROME STREET  
MISHAWAKA IN  
46544

COPPER & BRASS SALES  
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SOUTHFIELD MI  
48086

COPPER&BR Z62807 4075 INCLUSION SERIAL#: 20131126Z62807 PAGE 3 OF 3

CUSTOMER PURCHASE ORDER NO. & ITEM <b>5400205531</b>				Constellium ORDER NO. <b>110-513619</b>		CERTIFICATION	
ALLOY <b>7075</b>				CLAD. <b>00</b>	TEMPER <b>T651</b>	GAUGE <b>3.00000</b>	WIDTH <b>60.500</b> LENGTH <b>144.500</b>
ITEM ORDERED <b>TOOLING PLT-DIST/GE</b>							
CUSTOMER SPECIFICATION <b>AMS-QQ-A-250/12</b>							
PART NUMBER <b>ALFLR01006</b>		B/L NUMBER <b>Z62800</b>		DATE SHIPPED <b>11/29/13</b>			
WEIGHT SHIPPED <b>5,420</b>	NO. OF PIECES <b>2</b>	GOVT. CONTRACT NO.					

"Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."

Constellium Rolled Products Ravenswood, LLC  
Rt 2 South, Century Road  
P.O. BOX 68  
RAVENSWOOD, WV 26164 USA

*Rodney J. Feltz*  
Rodney J. Feltz - Laboratory Manager

LOT NUMBER	TEST DIRECTION	NO. OF TESTS	ULTIMATE STRENGTH K.S.I.		YIELD STRENGTH K.S.I.		ELONGATION %		COND % IACS			
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN	MAX		
THIS TEST REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF THE LABORATORY OR AUTHORIZED QUALITY DELEGATE.												
THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW.												
CHEMISTRY BY OES: ARKSPARK												
CHEMISTRIES REPORTED IN PERCENTAGE BY WEIGHT.												
WHEN FRACTURE TOUGHNESS TEST REQUIRED, TESTED PER ASTM E399.												
WHEN TENSILE TEST REQUIRED, TESTED PER ASTM E8; B557.												
Mark Paperwork: ALFLR01006												
DUNS Number: 090570149; CAGE Code: 1YWL9												
Mercury is not a normal contaminant in aluminum alloys and neither mercury nor any of its compounds were utilized in the manufacture of our product.												
"END OF CERTIFICATION"												

C HEM COMP	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS	
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTAL MAX.
SEE ACTUAL CHEMICAL COMPOSITION																			
ALUMINUM REMAINDER																			



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO22228

Purchase Order Date 11/28/2013  
PO Print Date 11/28/2013

Page Number 1 of 3

Order From : VC-COP001  
THYSSENKRUPP MATERIALS CA LTD  
O/A VPK METAL- C/O T27540/PO BOX 4275,POSTAL"A"  
TORONTO, ON M5W 5V8  
CA

Ship To : DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

11/28/2013  
11/28/2013

Contact Name		Buyer	Chantal Lavoie
Vendor Phone	905 669 9444	Customer POID	
Ship To Contact		Customer Tax #	10127-2607
Ship To Phone		Terms	Net 30
Ship Via:	Yours ppd	Currency	CAD
Ship Acct:		FOB	FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
Line Comments							
Delivery Comments							
1	M6061T6B4.500X4.500	6061-T6 Aluminum Bar 4.500" X 4.500"	12/11/2013	6.00	/	\$60.83	\$365.00
			No 12/11/2013		f		

MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR  
AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221

Line Total: \$365.00

2	M6061T6R1.625	6061T6 ROUND BAR 1.625	12/11/2013	24.00	/	\$4.32	\$103.60
			Yes 12/11/2013		f	13/11/14	

MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM ROUND BAR  
AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221

Line Total: \$103.60

PO Instructions: NO: PEC ST-626641  
NO: PEC ST-626859

Note:



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO22228

Purchase Order Date 11/28/2013

PO Print Date 11/28/2013

Page Number 2 of 3

Order From : VC-COP001  
THYSSENKRUPP MATERIALS CA LTD  
O/A VPK METAL- C/O T27540/PO BOX 4275,POSTAL "A"  
TORONTO, ON M5W 5V8  
CA

Ship To : DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

Contact Name  
Vendor Phone 905 669 9444  
  
Ship To Contact  
Ship To Phone  
Ship Via: Yours ppd  
Ship Acct:

Buyer Chantal Lavoie  
Customer POID  
Customer Tax # 10127-2607  
Terms Net 30  
Currency CAD  
FOB FCA - (Free Carrier)

3	M6061T6R2.000	6061T6 ROUND BAR 2.00	12/11/2013	12.00	\$6.78	\$81.40
			Yes	f		
			12/11/2013			

SAME AS ABOVE

Line Total: \$81.40

4	M7075T6B3.500X02.000	7075-T6 BAR 3.500' X 2.000"	12/11/2013	✓ 24.00	\$35.50	\$852.00
			Yes	f		
			12/11/2013			

MATERIAL: 7075-T6 OR T651/T6510/T6511/T62 ALUMINUM BAR  
OR AMS-QQA-225/9 OR AMS 4122/4123/4186/4187 OR PER  
AMS-QQ-A-200/11 OR CUT FROM PLATE QQ-A-250/12

5	M7075T6B4.000X03.000	7075-T6 BAR 4.000' X 3.000"	12/11/2013	✓ 12.00	\$62.13	\$745.61
			Yes	f		
			12/11/2013			

MATERIAL SAME AS ABOVE  
PLEASE CUT IN SECTION OF 6 FT

SO 13-12-11

Line Total: \$745.61

PO Instructions: NO: PEC ST-626641  
NO: PEC ST-626859

Note:



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO22228

Purchase Order Date 11/28/2013

PO Print Date 11/28/2013

Page Number 3 of 3

Order From : VC-COP001  
THYSSENKRUPP MATERIALS CA LTD  
O/A VPK METAL- C/O T27540/PO BOX 4275,POSTAL "A"  
TORONTO, ON M5W 5V8  
CA

Ship To : DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

Contact Name  
Vendor Phone 905 669 9444

Buyer Chantal Lavoie  
Customer POID

Ship To Contact  
Ship To Phone  
Ship Via: Yours ppd  
Ship Acct:

Customer Tax # 10127-2607  
Terms Net 30  
Currency CAD  
FOB FCA - (Free Carrier)

6	M7075T6B2.000X00.750	7075-T6 BAR 2.000' X 0.750"	12/11/2013	✓ 12.00	\$14.40	\$172.80
			Yes	f		
			12/11/2013			

MATERIAL SAME AS ABOVE

7	M7075T6B1.750X02.250	7075-T6 BAR 1.750" X 2.250"	12/11/2013	✓ 12.00	\$25.92	\$311.00
			Yes	f		
			12/11/2013			

MATERIAL AS ABOVE

8	M7075T6B6.000X0.250	7075-T6 BAR 6.000" X 0.250"	12/11/2013	✓ 12.00	\$14.96	\$179.50
			Yes	f		
			12/11/2013			

MATERIAL AS ABOVE

SP B-12-11

PO Instructions: NO: PEC ST-626641  
NO: PEC ST-626859

Note: Pricing listed above is as per contract agreement between Dart Aerospace and the respective manufacturer.  
No substitution or deviation without consent.

Certificate of Conformity or Material Certification required  YES  NO  
PST# 6122-5207

Change Nbr: 1 Change Date: 11/28/2013

Line Total: \$179.50

PO Total: \$2,810.91